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| 10/730,947      | 12/10/2003  | Justin L. Kreuzer    | 1857.0140002/JDE    | 6299             |

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EXAMINER

FINEMAN, LEE A

ART UNIT PAPER NUMBER

2872

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/730,947

Applicant(s)

KREUZER, JUSTIN L.

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/17/05</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This Office Action is in response to an amendment filed 19 January 2005 in which claim 1 was amended. Claims 1-12 are pending.

#### ***Terminal Disclaimer***

1. The terminal disclaimer filed on 19 January 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,680,798 has been reviewed and is accepted. The terminal disclaimer has been recorded.

#### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 611.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 102, 302, 402, 502, 602, 702, 802, 902, 320, 330, 340, 350, 360, 370, 380, 420, 430, 440, 450, 460, 470, 836, 936.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

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accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

4. The disclosure is objected to because of the following informalities: On page 9, section [0047], line 4, it appears that the equation is missing the “not equal to” symbol.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4-8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buzawa et al., US 3,917,399 in view of Owen et al., US 5,593,606.

Regarding claim 1, Buzawa et al. disclose an optical system (fig. 1) comprising: a wave plate (23); a reticle (15); and a first optical device (22), wherein the reticle is positioned along an axis of a light beam path (fig. 1) between a source (11) of the light beam and the first optical device (22), and wherein the wave plate is positioned along the axis (fig. 1) adjacent (i.e., close to, lying near) the reticle before the first optical device (22). Buzawa et al. disclose the claimed invention except for wherein said wave plate is a variable wave plate. Owen et al. teach a variable wave plate (see 42 in fig. 1 and col. 4, lines 13-19) positioned along an axis of a light

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beam path before a first optical device (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wave plate of Buzawa et al. be variable, as taught by Owen et al., for at least the purpose of enabling a user of said optical system to make adjustments, when necessary to ensure that the wave plate impart the desired degree of polarization to light propagating through said optical system.

Regarding claims 4 and 7, Buzawa et al. further disclose wherein the first optical device comprises: a first lens group (22) positioned along the axis (fig. 1); a reflective device (20) positioned to receive light from said first lens group (fig. 1); and a second lens group (22, in at least so far as it receives the light a second time) positioned to receive light from said reflective device (20); and wherein the reflective device directs light exiting the first lens group toward the second lens group (fig. 1)

Regarding claim 8, Buzawa et al. further disclose a beam directing system (20) positioned to receive light from said first optical device (22); and a second optical device (22, in at least so far as it receives the light a second time) positioned to receive light from the beam directed system (fig. 1).

Regarding claims 5, 6 and 12, Buzawa et al. in view of Owen et al. as set forth above, disclose the claimed invention except for explicitly stating the net optical power of the lens groups. Official notice is taken that the net optical power of a lens group is provided to converge or diverge the beam of light accordingly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the net power of the lens groups positive or negative as claimed to direct (converge or diverge) the light as needed in the system.

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7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buzawa et al. in view of Owen et al., as applied to claim 1 above, and further in view of Zhang et al. US 5,952,818.

Buzawa et al. in view of Owen et al., as applied to claim 1 above disclose the claimed invention except for wherein said variable wave plate is a Berek compensator. Zhang et al. teach the use of a Berek compensator as a variable wave plate. (fig. 1, compensator C and col. 7, lines 23-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the variable wave plate of Buzawa et al. in view of Owen et al. be a Beck compensator, as taught by Zhang et al., for at least the purpose of enabling fine control of the polarization state of light in said optical system.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buzawa et al. in view of Owen et al., as applied to claim 1 above, and further in view of Johnson et al. US 4,342,517.

Buzawa et al. in view of Owen et al., as applied to claim 1 above disclose the claimed invention except for wherein said variable wave plate is a Soleil-Babinet compensator. Johnson et al. teach the use of a Soleil-Babinet compensator as a variable wave plate. (col. 4, lines 34-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the variable wave plate of Buzawa et al. in view of Owen et al. be a Soleil-Babinet compensator, as taught by Johnson et al., for at least the purpose of enabling fine control of the polarization state of light in said optical system.

*Allowable Subject Matter*

9. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Claims 9-11 have allowable subject matter over the prior art for at least the reason that the prior art fails to teach and/or suggest the specific beam splitter positioning arrangement as set forth in the claimed combination.

Buzawa et al. further comprises a beam splitter (16) but it does not receive light from the first optical system and direct light toward the second optical system as claimed.

*Response to Arguments*

11. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

12. It is further noted that the applicant has previously argued (see paragraph 2, page 7 of the remarks from 31 August 2005) that "it would appear that to be "adjacent" two elements...would have to be almost touching in order to meet a common theme of the above definitions as required by law." The examiner respectfully disagrees and would like to point out that, if neither the specification nor the claim explicitly defines the term, the broadest reasonable interpretation may be used. It is the examiner's position that the broadest reasonable interpretation would be the

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applicant's supplied definition (1) close to, lying near. Clearly the reticle and wave plate of Buzawa et al. are close to and lying near each other in figure 1.

### *Conclusion*

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF  
October 13, 2005

  
MARK A. ROBINSON  
PRIMARY EXAMINER